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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,391	03/30/2001	Monte J. Rhoads	42390P11044	7361

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EXAMINER

LEVI, DAMEON E

ART UNIT	PAPER NUMBER
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2841

DATE MAILED: 04/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/823,391

Applicant(s)

RHOADS, MONTE J.

Examiner

Dameon E Levi

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-11, 13, 16-19, 23, 25, 28, 33 and 2122 is/are rejected.
- 7) ☒ Claim(s) 3, 4, 12, 14, 15, 20, 24, 26, 27, 32, 34 and 35 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Response to Arguments

Upon consideration of the arguments presented by the applicant in the Response to Requirement for Restriction, Paper No. 6 dated 03/08/2002 requesting for reconsideration of restriction requirement, the examiner hereby withdraws the restriction and all claims in the application are prosecuted on the merits therein.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-2,5-8, and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Chang US Patent 6273730.

Regarding claim 1 Chang discloses an apparatus comprising:

- a mounting portion to route at least one signal line from a first card connector on a circuit board to a first card connector on the mounting portion (see element 30, Fig 2)
- a routing portion to route at least one signal line from a second card connector on the circuit board to the mounting portion, the mounting portion to route the at least one signal line of the second card connector on the circuit board to a second card connector on the mounting portion (see element 32, Fig 2, see column 2, lines 8-9)

Regarding claim 2, Chang discloses wherein the mounting portion and the routing portion comprising a single integrated component (see Fig 2).

Regarding claim 5, Chang discloses wherein the routing portion comprising a first riser and a second riser, the first riser to route the at least one signal line of the second card connector on the circuit board to the second riser, the second riser to route the at least one signal line of the second card connector on the circuit board to the mounting portion. (see assembly comprising elements 30,32, Fig 2).

Regarding claim 6, Chang discloses wherein the first riser and the second riser comprising a single part (see Fig 2).

Regarding claim 7, Chang discloses wherein the first riser oriented substantially transverse to the circuit board and the second riser oriented substantially parallel to the circuit board (see Fig 2).

Regarding claim 8, the use of a flexible cable as a routing portion is seen as an alternate means for signal routing and is merely a matter of design choice by the applicant.

Regarding claim 33, Chang discloses an apparatus comprising:

- first routing means for routing at least one signal line from a first card connector on a circuit board to a first card connector disposed on the first routing means (see element 30, Fig 2)
- second routing means for routing at least one signal line from a second card connector on the circuit board to the first routing means, the first routing means to route the at least one signal line of the second card connector on the circuit board to a second card connector disposed on the first routing means (see element 32, Fig 2, see column 2, lines 8-9).

Claims 9,10,11,13,21,22,23,and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Leman US Patent 6046912.

Regarding claim 9, Leman discloses an apparatus comprising:

- a circuit board; a processor disposed on the circuit board; a chip set disposed on the circuit board and coupled to the processor (see elements 300,318 Fig 5)
- a first card connector disposed on the circuit board and coupled to the chip set by at least one signal line (see element 312, Fig 4)
- a second card connector disposed on the circuit board and coupled to the chip set by at least one signal line(see element 306, Fig 4)

- a mounting portion secured in the first card connector on the circuit board, the mounting portion to couple the at least one signal line of the first card connector on the circuit board to a first card connector disposed on the mounting portion (see element 500, Fig 5)
- a routing portion secured in the second card connector on the circuit board, the routing portion to couple the at least one signal line of the second card connector on the circuit board to the mounting portion, the mounting portion to couple the at least one signal line of the second card connector on the circuit board to a second card connector disposed on the mounting portion (see element 302, Fig 3).

Regarding claim 10, Leman discloses a peripheral card secured in one of the first card connector on the mounting portion and the second card connector on the mounting portion (see column 2, lines 48-50).

Regarding claim 11 Leman discloses the mounting portion to orient the peripheral card substantially parallel to the circuit board (see column 2, lines 48-50).

Regarding claim 13, Leman discloses the mounting portion and the routing portion comprising a single integrated component (see element 302, Fig 3).

Regarding claim 21, Leman discloses an apparatus comprising:

- a chassis; a circuit board disposed in the chassis; a processor disposed on the circuit board; a chip set disposed on the circuit board and coupled to the processor (see elements 300, 318 Fig 5)

- a first card connector disposed on the circuit board and coupled to the chip set by at least one signal line (see element 312, Fig 4)
- a second card connector disposed on the circuit board and coupled to the chip set by at least one signal line(see element 306, Fig 4;
- a mounting portion secured in the first card connector on the circuit board, the mounting portion to couple the at least one signal line of the first card connector on the circuit board to a first card connector disposed on the mounting portion(see element 500, Fig 5)
- a routing portion secured in the second card connector on the circuit board, the routing portion to couple the at least one signal line of the second card connector on the circuit board to the mounting portion, the mounting portion to couple the at least one signal line of the second card connector on the circuit board to a second card connector disposed on the mounting portion (see element 32, Fig 2, see column 2, lines 8-9).

Regarding claim 22, Leman discloses the apparatus further comprising a peripheral card secured in one of the first card connector on the mounting portion and the second card connector on the mounting portion (see column 2, lines 48-50).

Regarding claim 23 Leman discloses the mounting portion to orient the peripheral card substantially parallel to the circuit board (see column 2, lines 48-50).

Regarding claim 25, Leman discloses the mounting portion and the routing portion comprising a single integrated component (see element 302, Fig 3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16-19 and 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leman US Patent 6046912 in view of Chang US Patent 6273730.

Regarding claim 16, Leman discloses the instant claimed invention except wherein the routing portion comprising a first riser and a second riser, the first riser to couple the at least one signal line of the second card connector on the circuit board to the second riser, the second riser to couple the at least one signal line of the second card connector on the circuit board to the mounting portion.

Chang discloses an assembly wherein a routing portion comprising a first riser and a second riser, the first riser to couple the at least one signal line of the second card connector on the circuit board to the second riser, the second riser to couple the at least one signal line of the second card connector on the circuit board to the mounting portion (see assembly comprising elements 30,32, Fig 2).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a first and second risers as taught by Chang in the apparatus of Leman for the purpose of orienting the card connectors in a horizontal position within the assembly (cited by Chang, column 2, lines 29-32)

Regarding claim 17, Leman discloses the instant claimed invention except the first riser and the second riser comprising a single part.

Chang discloses an assembly wherein a first riser and a second riser comprising a single part (see Fig 2).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have made the first and second risers in Leman as a single part as taught by Chang for the purpose of firmly securing the card supporting assembly in position.

Regarding claim 18, Leman discloses the instant claimed invention except the first riser oriented substantially transverse to the circuit board and the second riser oriented substantially parallel to the circuit board.

Chang discloses an assembly wherein a riser oriented substantially transverse to the circuit board and a second riser oriented substantially parallel to the circuit board (see Fig 2).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have oriented the risers of Leman as disclosed by Chang for the purpose of mounting the circuit cards in a horizontal position within the assembly.

Regarding claim 19, the use of a flexible cable as a routing portion is seen as an alternate means for signal routing, lacking a showing of criticality and failing to patenably distinguish over the prior art.

Regarding claim 28, Leman discloses the instant claimed invention except wherein the routing portion comprising a first riser and a second riser, the first riser to couple the at

least one signal line of the second card connector on the circuit board to the second riser, the second riser to couple the at least one signal line of the second card connector on the circuit board to the mounting portion.

Chang discloses an assembly wherein a routing portion comprising a first riser and a second riser, the first riser to couple the at least one signal line of the second card connector on the circuit board to the second riser, the second riser to couple the at least one signal line of the second card connector on the circuit board to the mounting portion (see assembly comprising elements 30,32, Fig 2).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included a first and second risers as taught by Chang in the apparatus of Leman for the purpose of orienting the card connectors in a horizontal position within the assembly (cited by Chang, column 2, lines 29-32)

Regarding claim 29, Leman discloses the instant claimed invention except the first riser and the second riser comprising a single part.

Chang discloses an assembly wherein a first riser and a second riser comprising a single part (see Fig 2).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have made the first and second risers of Leman as a single part as disclosed by Chang for the purpose of firmly securing the card supporting assembly in position

Regarding claim 30, Leman discloses the instant claimed invention except the first riser oriented substantially transverse to the circuit board and the second riser oriented substantially parallel to the circuit board.

Chang discloses an assembly wherein a riser oriented substantially transverse to the circuit board and a second riser oriented substantially parallel to the circuit board (see Fig 2).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have oriented the risers as disclosed by Chang for the purpose of mounting the circuit cards in a horizontal position within the assembly

Regarding claim 31, the use of a flexible cable as a routing portion is seen as an alternate means for signal routing, lacking a showing of criticality and failing to patenably distinguish over the prior art.

Regarding claims 36-39, the methods disclosed therein are deemed as inherent in the assembly of the claimed apparatus of the preceding claims as fully met by the accompanying references, (Leman, Chang) and are subsequently rejected.

Allowable Subject Matter

Claims 3,4,12,14,15,20,24,26,27,32,34,35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

DeWitt et al US Patent 5926378.

Taylor et al US Patent 5825630

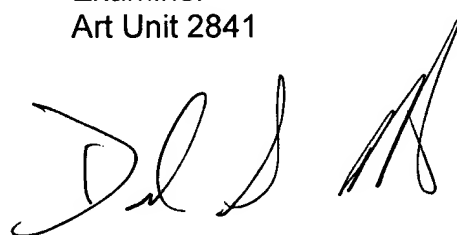
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dameon E Levi whose telephone number is (703) 305-0426. The examiner can normally be reached on Mon.-Fri. (9:00 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David S Martin can be reached on (703) 308-3121. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0058.

Dameon E Levi
Examiner
Art Unit 2841

DEL
April 6, 2002

A handwritten signature in black ink, appearing to read 'D. S. Martin', is written over a horizontal line.

DAVID S. MARTIN
PRIMARY EXAMINER
GROUP 2100